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Abstract

A method for robust speech classification in speech coding and, in particular, for robust classification in the presence of background noise is herein provided. A noise-free set of parameters is derived, thereby reducing the adverse effects of background noise on the classification process. The speech signal is identified as speech or non-speech. A set of basic parameters is derived for the speech frame, then the noise component of the parameters is estimated and removed. If the frame is non-speech, the noise estimations are updated. All the parameters are then compared against a predetermined set of thresholds. Because the background noise has been removed from the parameters, the set of thresholds is largely unaffected by any changes in the noise. The frame is classified into any number of classes, thereby emphasizing the perceptually important features by performing perceptual matching rather than waveform matching.